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**Turkey** 

**Planting Seeds** 

Annual

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### **Report Highlights:**

The GOT is preparing a new seed law which is expected to be adopted by the end of 2004 latest. According to a draft of the law, a Turkish Seed Industry Union (TSIU) will be established with responsibilities currently held by the Ministry of Agriculture and Rural Affairs. The government is also developing regulations for field trials, certification, production, and marketing of transgenic seeds. Even though seed imports fell slightly in 2001 and 2002, they are expected to increase for the next 3 - 5 years in order to meet domestic demand.

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## **Executive Summary**

The Turkish seed industry has developed significantly since privatization began in the 1980's. To assist in this continued development, the Turkish government plans to transfer more responsibilities to the private sector. As part of this process, a new Seed Law and a regulations governing transgenic seeds are expected to be completed soon.

Seed imports fell slightly in 2001 and 2002 due primarily to the economic crisis. However, domestic seed production is not sufficient and is not expected to increase adequately to meet needs in the short and medium term. Vegetable and fodder crops, pasture, and meadow seeds as well as seed potatoes, are among the seeds that Turkey is expected to continue to import at significant levels for at least the next three to five years. Turkey is also expected to continue to import cotton seed. From time to time, other seeds such as, wheat, barley, paddy rice, sugar beet, hybrid corn and hybrid sunflower seeds are also imported. Several U.S. seed companies, including Monsanto, Pioneer, and Delta Pine are well-established in Turkey. These companies generally import parent seed for local propagation with most of their production sold domestically. Surplus production is exported primarily to Middle Eastern and European markets.

In the past, the government of Turkey (GOT) heavily subsidized agricultural inputs, including seeds and also provided production incentives through high procurement prices. Moreover the GOT provided support for farmers that used certified seeds. These policies have been changing and recent governments have made commitments to reduce subsidies and support programs over time. The components of the current government's reform program include phasing out existing support programs and replacing them with a direct income support system targeted at poor farmers. However, land costs on Turkish State farms (TIGEM) are not reflected in production costs. As a result, use of seeds produced by TIGEM Farms continue to be somewhat subsidized.

The GOT published a new Plant Quarantine Regulation on July 6, 2003 and went into effect on October 6 for all imports. The New Regulation restricts seed imports for potatoes, grass, and wheat. The industry is trying to resolve these issues with GOT officials.

The GOT allows neither production nor importation of genetically modified (GM) seeds. Results from previous GM cotton and corn seed trials have not been released.

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#### **Production**

One hundred and six private companies and thirty-one public sector entities currently produce, import, procure, or distribute seed in Turkey. Ownership of the private companies ranges from 100 percent Turkish-owned to 100 percent foreign-owned companies with various combinations in between.

Most major private seed companies are members of the Turkish Seed Industry Association (TURK-TED), which assists member companies with studies on seed production, certification, storage, packaging, distribution and variety breeding. TURK-TED has 59 members who account for at least 90 percent of all private sector seed production. In 2002, privately owned companies produced almost 100 percent of all seed potatoes, vegetable seeds, hybrid sunflower, hybrid corn, and soybean seeds produced in Turkey. This equals the total demand for these seeds since the Ministry of Agriculture assigns companies production quotas by type of seed. Only those companies which are exporting may produce more than their assigned quota. Additionally, about 31.6 percent of fodder crop, 23.2 percent of cotton, 13.7 percent of barley, and 9.9 percent of wheat seeds were produced by the privately owned companies in 2002. The General Directorate of Agricultural Enterprises (TIGEM) is TURK-TED's only public member. The production and distribution of Certified Seeds in 2002 and production for 2003 are provided in Table 1.

For the last fifty years, TIGEM has been the major government entity carrying out seed propagation and distribution. Although its responsibilities have recently diminished, TIGEM is still a significant producer of cereal, cotton and fodder crop seeds. Table 2 provides the total quantities of seed (certified at all levels plus controlled) produced and distributed in 2002 and programmed to be distributed for 2003 by TIGEM. In addition to the information provided in Table 2, TIGEM also produces and prepares more seeds to be planted on their own farms.

## Consumption

Certified seed use decreased in recent years, especially in 2001, due to the economic crisis which also affected total crop production. However, consumption should continue to increase in the future in response to growing demand, particularly for greenhouse vegetable production. In addition, demand for hybrid corn (both for grain and silage), hybrid sunflower and fodder crop seeds are expected to continue to increase in response to expected higher demand from the poultry, livestock, and vegetable-oil sectors.

Certified seed usage varies considerably. Table 3 shows certified seed needs and the ratios of the certified seed distribution over total need by seed variety in Turkey. As Table 3 shows, farmers generally receive far less certified seed despite their needs. The GOT stopped subsidizing the use of certified seeds at the end of 2001. No payments have been made to farmers for seeds since then.

Table 1. Certified Seed Production and Distribution in 2002 and Program for 2003

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Type of Seed	Produced in 2002 (MT)	Distributed in 2002 (MT)	Programmed for 2003 (MT)
Wheat	80,107	80,089	291,958
Barley	4,376	4,127	28,070
Hybrid Corn	15,339	7,468	18,065
Paddy Rice	969	904	1,427
Hybrid Sunflower	2,130	2,021	6,145
Soybeans	585	946	585
Potatoes	26,259	26,000	64,306
Cotton	25,132	1,265	10,183
Cotton (Delinte)	1/	7,195	1/
Chick peas	388	165	880
Dry beans	20	24	62
Vegetables (Kg.)	1,249	2,137	1,783
Alfalfa	328	310	508
Sainfoin	411	885	1,095
Vetch (Hungarian)	966	770	1,227
Vetch (Ordinary)	434	1/	542
Sudan grass	6	47	6
Sorghum x Sudan grass	100	95	125
Fodder beets	22	44	90
Fodder wheat crops	320	2,326	630

<sup>1/</sup> Cotton (Delinte) seed production information was not provided separately but is included in total cotton. Similarly, vetch (ordinary) seed data distributed in 2002 were not provided separately. Source: National Seed Procurement, Distribution and Production Program 2003, The General Directorate of Agricultural Production and Development (TUGEM), The Ministry of Agriculture and Rural Affairs

 $\begin{tabular}{l} Table 2. Quantities of Seeds Produced and Distributed in 2002 and Programmed for Distribution in 2003 \\ by TIGEM \end{tabular}$ 

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Type of Seed	Produced in 2002 (MT)	Distributed in 2002 (MT)	Programmed for 2003 (MT)
Wheat	316,032	43,521	93,450
Barley	28,827	2,020	10,417
Corn (Hybrid)	60	15.5	20
Corn (Composite)	826	345	350
Sunflower (Hybrid)	210	101	60
Sunflower (Composite)	376	74	40
Cotton	6,551	161	1,920
Paddy rice	360		90
Dry beans	168	5	18
Chick peas	1,459	38	680
Vegetables (Kg.)	750	600	
Sainfoin	560	288	1020
Alfalfa	322	129	150
Vetch	1,502	251	1542

Source: The General Directorate of Agricultural Enterprises (TIGEM), The Ministry of Agriculture and Rural Affairs

Table 3. Certified Seed Need and Distribution Ratio

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Seed Variety	Planting Area (Ha)	Seed Need Per Ha (Kg.)	Replacement Period (Year)	Est. Total Seed Need (MT)	Distrib. in 2002 (MT)	Ratio of Dist./Need (%)
Wheat	9,400,000	200	3	626,667	80,089	12.8
Barley	3,629,000	200	3	241,933	4,127	1.7
Hybrid Corn	555,000	30	1	16,650	7,468	44.9
Paddy rice	58,000	200	2	2,800	904	32.3
Chick peas	636,000	100	5	12,720	165	1.3
Dry beans	176,000	100	5	3,520	24	0.7
Hybrid Sunflower	542,000	4	1	2,710	2,021	74.6
Potatoes	205,000	3,000	2	252,500	26,000	10.3
Soy beans	15,000	90	1	1,500	946	63.1
Peanuts	28,300	50	1	710	1.1	0.2
Cotton (Delinte)	654,177	20	1	13,084	7,584	58.0
Vegetable	793,057	Various	Various	7,500	2,137	28.5
Alfalfa	250,800	20	4	1,254	310	24.7
Sainfoin	107,500	80	3	2,866	885	30.9
Vetch	205,051	90	5	4,055	770	19.0
Sudan grass	8,100	30	2	121	47	38.8
Fodder beets	3,100	30	2	46	44	95.7

Source: National Seed Procurement, Distribution and Production Program 2003, The General Directorate of Agricultural Production and Development (TUGEM), The Ministry of Agriculture and Rural Affairs

#### Trade

Domestic seed production is not sufficient to meet local demand and is not expected to increase adequately in the short term. Vegetable seeds, fodder crops and pasture and meadow seeds as well as seed potatoes, are among the varieties that Turkey is expected to continue to import at significant levels for at least the next three to five years. Turkey is also expected to continue to import cotton seed since Turkish production does not meet quality and variety needs. From time to time and depending upon supply and demand, other seed varieties may also be imported on a temporary basis. In 2002, for instance, Turkey imported hybrid sunflower and sugar beet seeds both from France. In earlier years Turkey also imported wheat, barley, paddy rice and hybrid corn seeds from various countries.

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According to official trade data, Turkey imported about 15 TMT of seeds worth about USD 43.4 million and exported about 19.6 TMT of seed worth about USD 21.2 million in 2002. Although the overall quantity of seed imports has been decreasing in recent years, the value has continued to increase. In 2001 and 2002, however, the value of imports fell slightly, which is attributed primarily to the economic crisis in Turkey. Nearly half of the hybrid corn seed is imported from the United States. The Netherlands and Israel are the leading exporting countries of vegetable seeds for greenhouses, although some vegetable seed for field production is also imported from the United States.

Vegetable seed as well as seed-potato imports increased significantly in 2002, while imports of wheat, hybrid corn, hybrid sunflower, cotton and fodder crops, pasture and meadow seed decreased. Hybrid corn, cotton, fodder crop, pasture and meadow seed exports increased in 2002, while exports of wheat, barley, hybrid sunflower, and vegetable seeds decreased. Turkey is primarily importing hybrid corn and hybrid sunflower seeds to produce and export hybrid corn and hybrid sunflower seeds.

TIGEM has been the only public entity involved with seed imports and exports in recent years. TIGEM did not import or export any seed in 2002 although it may import some wheat and cotton seeds in 2003. TIGEM imported some wheat seed for trials under rain fed conditions from the United States last year along with some wheat seed from France for use in the coastal regions. TIGEM is also contracting with some private producers for cotton seed. TIGEM is now considering importing some cotton seed that would be suitable for machine harvesting. Turkey's seed imports and exports in 2002 are provided in Table 4 and Table 5, respectively.

Table 4. Turkey's Seed Imports in 2002 (MT)

Seeds	Total/Country	Quantity (MT)	Value (USD 1,000)
Wheat	Total	4	3
	United States	3	
Barley	Total	6	1
Sunflower (hybrid)	Total	174	2,139
	United States	2	
	France	129	
Corn (hybrid)	Total	765	1,854
	United States	355	
	Croatia	99	
	Netherlands	70	
	Spain	67	
Corn	Total	72	412
	United States	22	

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	France	49	
Cotton	Total	158	277
	United States	96	
	France	46	
Other Oilseeds	Total	6	5
	United States	6	5
Potatoes	Total	8,888	5,535
	Germany	7,255	
Vegetables (total)	Total	2,199	28,598
	United States	32	
	Netherlands	50	
	Israel	3	
	France	21	
Sugar Beets	Total	76	791
	France	45	
Fodder Crops, Pasture & Meadow	Total	2,685	3,788
	United States	189	
	Denmark	865	
	Netherlands	794	
	Germany	268	
	France	115	
Grand Total		15,034	43,403

Source: State Institute of Statistics

Table 5. Turkey's Seed Exports in 2002 (MT)

Seeds	Total/Country	Quantity (MT)	Value (USD 1,000)
Wheat	Total	81	22

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Barley	Total	2	1
Sunflower (hybrid)	Total	1,384	2,930
	Hungry	434	
	Spain	364	
	France	350	
Cotton	Total	886	2,341
	Greece	687	
	Spain	149	
Corn (hybrid)	Total	8,082	10,118
	France	1,899	
	Spain	1,439	
	Italy	1,426	
Corn (other)	Total	403	657
Other Oilseeds	Total	9	9
Vegetable (total)	Total	58	2,565
	United States	7	
	Netherlands	1	
	Japan	2	
	Saudi Arabia	2	
	Jordan	8	
Sugar Beets	Total	122	424
	Germany	122	
Fodder Crops, Pasture & Meadow	Total	8,534	2,180
	Italy	4,976	
	Spain	1,693	
	Belgium	788	
	Netherlands	516	
General Total		19,552	21,247

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Source: State Institute of Statistics

#### **Stocks**

Seed stock data is not available. Since both public and private companies are producing according to the National Procurement, Distribution and Production Program, they do not have large carry over stocks.

## **Policy**

Recent governments have made commitments to gradually reduce agricultural subsidies. The components of the reform program included phasing out existing support policies and replacing them with a direct income support system targeted at poor farmers. One of the subsidies eliminated was for certified seed use. A farmers' registration system to support the new program is still being developed and expected to be completed in a few years.

The current Seed Law (Numbered 308) was adopted in 1962 and is currently in use. It placed all seed production, importation and pricing under government control. The Seed Law was considered outdated by both the industry and government even though there have been numerous amendments since 1982 to encourage privatization, as well as to regulate the importation, production, procurement, certification and distribution of high quality seeds.

A commission, which is composed of the relevant departments of the Ministry of Agriculture and Rural Affairs (General Directorates of Agricultural Research, Production and Development, Protection and Control and Directorate of Seed Certification) and industry, as well as universities and the Turkish Seed Industry Association, jointly worked during the last four years and developed draft law which would incorporate harmonize Turkey's Regulations with the EU.

According to the draft law, a Turkish Seed Industry Union (TSIU) will be established and the government will transfer some of its duties and responsibilities to this new entity. According to industry sources, the TSIU will be similar to the French National Seed and Seedling Inter Vocational Organization (GNIS). Industry sources expect that adaptation of the New Seed Law will be completed in 2003 or latest in 2004, since it is in the Emergency Action Plan of the new Government.

The government intended to prepare a transgenic seed regulation. The regulation would cover trials, certification, production, and marketing of transgenic seeds. A commission was established and began to work for the preparation of the regulation, including representatives from Ministry of Agriculture, Ministry of Health and Social Security, Ministry of Environment and Forestry, Turkish Scientific and Technical Research Institution (TUBITAK), Universities, and Turkish Seed Industry Association (TURK-TED). The group met a few times in the beginning, but it was broken up later without accomplishing anything.

To support the use of high quality seeds, the GOT subsidized seed production using cheap credits and providing lower seed prices. As a part of its economic reform program, the government ended the seed subsidy program on December 31, 2001. Since then, only cotton and soybean producers are paid a ten percent additional premium for use of certified seeds, if they can provide documents that they used certified seeds at the time they sell their crops.

Even though the pace of development was slow due to the economic crises, the GOT continues to work on Southeastern Anatolia Project (GAP) which is expected to have a significant and growing impact on seed

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demand. Supporting fodder crop production is also among supports the current GOT continues to provide to the livestock sector, which in turn will increase the needs for fodder crop seeds.

Although Turkey publishes tariff levels for seeds every year (given in Table 6), the Ministry of Agriculture has had the right to suspend import duties since 1993, if those seeds are considered necessary. The Ministry of Agriculture and Rural Affairs (MARA) officials indicate that except for flower and ornamental plant seeds, almost all seeds are currently imported duty free. Flower and ornamental plant seeds for propagation are also being imported with zero duty. Importers who import flower and ornamental planting seeds for commercial purposes (e.g., reselling) are obliged to pay the duties.

The only changes in the published seed tariffs in 2003 were a reduction for "all other" planting seeds from 18.4 percent to 17.8 percent for imports from EU and EFTA countries, and from 20.4 percent to 19.8 percent for other countries. Table 6 presents officially published but not applied duty rates for imports of various seeds.

Seed imports are restricted to those companies that produce, procure, and market seeds domestically (including the Farmers Union, Central Union of Agricultural Credit Cooperatives, and related agricultural sales cooperatives). The Ministry of Agriculture and Rural Affairs (MARA) justifies this policy as a way of encouraging investments in the domestic seed industry since most private seed companies have acquired their capital and technical expertise from joint ventures with international firms. Additionally, importers must have an import license from MARA. Seeds must be grown locally on trial plots and approved by MARA before they are imported.

**Table 6: Import Duties on Seed Imports** 

Type of Seed	EU & EFTA Countries (%)	Other Countries (%)
Cereal seeds (except rice)	0	0
Rice seeds	10	12

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Sunflower seeds	0	0
Soybean seeds	0	0
Peanut seeds	20	20
Rapeseed	0	0
All other oil seeds, inc. cotton, sesame, safflower, palm and mustard	4	4
Hemp fibre seeds	4	4
Flax fibre seeds	12	12
Tea seeds	4	4
Sugar beat seeds	2.4	3.9
Flower seeds	4	6
Forest tree seeds	4	6
Fruit tree seeds	4	6
All other planting seeds (12.09), including all vegetable and fodder crop seeds	17.8	19.8

Source: Official Gazette dated December 31, 2002

# **Marketing**

Several U.S. seed companies, including Monsanto, Pioneer, Delta Pine are well-established in Turkey. These companies generally import parent seed for local propagation, with most of their production sold domestically. Surplus production may be exported, primarily to Middle Eastern and European markets.

The GOT published a new Plant Quarantine Regulation in the Official Gazette on July 6, 2003. This Regulation introduced some new restrictions on imported seed. Among these, some new viruses were included for potato seed, ergot tolerance for grass seed was reduced from 3 sclerot to 0 in 100 grams, and ergot and Karnal bunt became more restrictive in wheat seed. The Turkish Seed Industry is concerned with these restrictions and has requested a review of these restrictions by the Ministry of Agriculture officials.